

DRILLING SPECIALTIES COMPANY
BARTLESVILLE OKLAHOMA 74004

918 661-5405
918 661-6153
918 661-5333

TELEX 49-2455
TWX 910 841-2560

PLAINTIFF'S EXHIBIT

HCI-10

September 2, 1982

Material Safety Data Sheets

J. H. Moore
Manager of Purchases
NL Baroid/NL Industries, Inc.
P.O. Box 1675
Houston, TX 77251

Dear Mr. Moore:

Attached, per your request, are Material Safety Data Sheets for the following products:

"Drispac polymer"
"Flosal"
"Soltex®"

Communication of physical property, health and safety information in Material Safety Data Sheets is a key element in our product safety program. With this information you can better fulfill your obligation to educate exposed personnel in the proper product handling techniques required to maintain safety in the workplace.

If additional information is required, please advise us.

Very truly yours,



R. R. Simmons
Senior Standards &
Regulations Analyst
Seneca Building
(918) 661-8327

RRS:afb

Attachments

RECEIVED

SEP 7 1982

BAROID PURCHASING DEPT.
HOUSTON, TEXAS

U.S. DEPARTMENT OF LABOR

WAGE AND LABOR STANDARDS ADMINISTRATION
Bureau of Labor Standards

MATERIAL SAFETY DATA SHEET

SECTION I	
MANUFACTURER'S NAME Hercules Inc	EMERGENCY TELEPHONE NO. 302 575-5000
ADDRESS (Number, Street, City, State, and ZIP Code) 900 Market Street, Wilmington, DE 19899	
CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS Drispac polymer
CHEMICAL FAMILY Cellulose ether	FORMULA Available in high or low viscosity grade

SECTION II HAZARDOUS INGREDIENTS					
PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)
Note: As we interpret the Occupational Safety and Health Act of 1970, this product should not be considered hazardous.					

SECTION III PHYSICAL DATA			
BOILING POINT (°F.)	NA	SPECIFIC GRAVITY (H ₂ O=1)	ca. 1.6 g/ml (film)
VAPOR PRESSURE (mm Hg.)	NA	PERCENT VOLATILE BY VOLUME (%)	Moisture 8% max.
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ = 1)	(Butyl acetate = 1) NA
SOLUBILITY IN WATER % by wt @ 25 C	complete		
APPEARANCE AND ODOR	dry, granular powder of light color; odorless		

SECTION IV FIRE AND EXPLOSION HAZARD DATA			
FLASH POINT (Method used)	NA	FLAMMABLE LIMITS	LeI UeI
EXTINGUISHING MEDIA	water, CO ₂ , foam or dry chemical		0.150 oz per cu ft NA
SPECIAL FIRE FIGHTING PROCEDURES	None		
UNUSUAL FIRE AND EXPLOSION HAZARDS	Treat as a flammable dust in the finely divided and suspended state.		

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME Arnold & Clarke Chemical Company		EMERGENCY TELEPHONE NO. 713 869-0541
ADDRESS (Number, Street, City, State, and Zip Code) 6325 Hurst Street, P.O. Box 10660, Houston, TX 77018		
CHEMICAL NAME AND SYNONYMS sodium asphalt sulfonate		TRADE NAME AND SYNONYMS Soltex®
CHEMICAL FAMILY sulfonate	FORMULA	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	NA	SPECIFIC GRAVITY (H ₂ O=1)	0.98
VAPOR PRESSURE (mm Hg.)	NA	PERCENT VOLATILE BY VOLUME (%)	8% max
VAPOR DENSITY (AIR=1)	NA	EVAPORATION RATE (_____ = 1)	moisture
SOLUBILITY IN WATER	75 ± 10% at 90 C		
APPEARANCE AND ODOR	Dark brown-black friable flake		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	NA	FLAMMABLE LIMITS	LeI	UeI
EXTINGUISHING MEDIA				
SPECIAL FIRE FIGHTING PROCEDURES				
UNUSUAL FIRE AND EXPLOSION HAZARDS				

NL

August 27, 1982

Mr. R.L. Clampitt
Drilling Specialties Co.
309 Short St.
Bartlesville, OK 74004

Dear Mr. Clampitt:

NL Baroid is in the process of updating its safety files, and need Material Data Sheets for the product(s) currently purchased from your company:

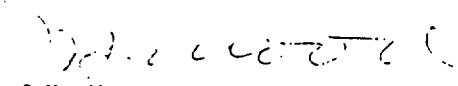
Drispac Polymer
Flosal/Asbestos
Soltex

Please send these sheets to the following:

J.H. Moore, Manager of Purchases
NL Baroid/NL Industries, Inc.
P.O. Box 1675
Houston, TX 77251

Your cooperation and assistance in this matter is greatly appreciated.

Yours truly,


J.H. Moore
Manager of Purchases

JHM/css

CC ~~R.~~ Somers
K. Thoresen

NL Baroid NL Industries, Inc
P O Box 1675, Houston, Texas 77001 Tel (713) 527-1100

SECTION V - HEALTH HAZARD DATA	
THRESHOLD LIMIT VALUE	See Section II and attached Federal Register - 6/7/72
EFFECTS OF OVEREXPOSURE	Long term exposure to high concentrations of asbestos fiber may cause pulmonary disease.
EMERGENCY AND FIRST AID PROCEDURES	Avoid breathing excessive dust when handling, dumping and mixing. See caution label on bag.

SECTION VI - REACTIVITY DATA			
STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
INCOMPATIBILITY (Materials to avoid)			
HAZARDOUS DECOMPOSITION PRODUCTS			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES	
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED. Vacuum clean spillage. Repair broken bags. If sweeping is necessary, wet down spillage. Use approved respiratory equipment when required.	
WASTE DISPOSAL METHOD Place waste in closed containers. Dispose of waste in closed containers. Avoid breathing excessive dust.	

SECTION VIII - SPECIAL PROTECTION INFORMATION		
RESPIRATORY PROTECTION (Specify type) U.S. Bureau of Mines approved respirator - See OSHA 1910.93 Asbestos, Fed. Reg. 6/		
VENTILATION	LOCAL EXHAUST MECHANICAL (General) Control with mechanical dust collection equip. to within TLV	SPECIAL OTHER
PROTECTIVE GLOVES	EYE PROTECTION	
OTHER PROTECTIVE EQUIPMENT		

SECTION IX - SPECIAL PRECAUTIONS	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Maintain good housekeeping practices. Vacuum clean waste and place in closed containers.	
OTHER PRECAUTIONS SEE CAUTION LABEL ON BAG.	

PAGE (2) While the information and recommendations set forth herein are believed to be accurate as of the date hereof, JOHNS-MANVILLE CORPORATION MAKES NO WARRANTY WITH RESPECT THERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON.

§ 1910.93 Air contaminants.

TABLE O 3—MINERAL DUSTS

Substance	Mppcf	Mg./M ³
Fibers:		
<i>Crystalline:</i>		
Quartz (respirable).....	250	10mg./M ³ = %SiO ₂ +1 %SiO ₂ +2 30mg./M ³
Quartz (total dust).....		%SiO ₂ +3
<i>Crystalline: Use 1/2 the value calculated from the count or mass formula for quartz.</i>		
<i>Tremolite: Use 1/2 the value calculated from the formula for quartz.</i>		
Amorphous, including natural diatomaceous earth.....	20	10mg./M ³ %SiO ₂
Silicates (less than 1% crystalline silica):		
Alka.....	20	
Scapolite.....	20	
Talc.....	20	
Portland cement.....	20	
Graphite (natural).....	15	
Coal dust (respirable fraction less than 5% SiO ₂).....		2.4mg./M ³ or 10mg./M ³ %SiO ₂ +2
For more than 5% SiO ₂		%SiO ₂ +2
Inert or Nukonic Dust:		
Respirable fraction.....	15	5mg./M ³
Total dust.....	20	15mg./M ³

NOTE: Conversion factors—
mg./M³ X 35.3 = million particles per cubic meter
= particles per c.c.

(1) Number of particles per cubic foot of air, based on immediate samples counted by light-field techniques.

(2) The percentage of crystalline silica in the formula is the amount determined from airborne samples, except in those instances in which other methods have been shown to be applicable.

(3) As determined by the membrane filter method at 45 X phase-contrast magnification.

(4) Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size-selector, with the following characteristics:

Aerodynamic diameter (unit density sphere)	Percent passing selector
2	80
2.5	75
3.5	60
5.0	25
10	0

1. The measurements under this rule refer to the use of an AEC respirator. If the respirable fraction of dust is determined with a NIOSH filter, the limits corresponding to that of a 10 micrometer size selector would apply.

2. A new § 1910.93a is added to Part 1910, reading as follows:

§ 1910.93a Asbestos.

(a) **Definitions.** For the purpose of this section, (1) "Asbestos" includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

(2) "Asbestos fibers" means asbestos fibers longer than 5 micrometers.

(b) **Permissible exposure to airborne concentrations of asbestos fibers—**(1) **Standard effective July 7, 1972.** The 8-hour time-weighted average airborne concentrations of asbestos fibers to which any employee may be exposed shall not exceed five fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (c) of this section.

(2) **Standard effective July 1, 1976.** The 8-hour time-weighted average airborne concentrations of asbestos fibers

to which any employee may be exposed shall not exceed two fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (c) of this section.

(3) **Ceiling concentration.** No employee shall be exposed at any time to airborne concentrations of asbestos fibers in excess of 10 fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (c) of this section.

(c) **Methods of compliance—**(1) **Engineering methods.** (i) **Engineering controls.** Engineering controls, such as, but not limited to, isolation, enclosure, exhaust ventilation, and dust collection, shall be used to meet the exposure limits prescribed in paragraph (b) of this section.

(ii) **Local exhaust ventilation.** (a) Local exhaust ventilation and dust collection systems shall be designed, constructed, installed, and maintained in accordance with the American National Standard Fundamentals Governing the Design and Operation of Local Exhaust Systems, ANSI Z9.2-1971, which is incorporated by reference herein.

(b) See § 1910.6 concerning the availability of ANSI Z9.2-1971, and the maintenance of a historic file in connection therewith. The address of the American National Standards Institute is given in § 1910.100.

(iii) **Particular tools.** All hand-operated and power-operated tools which may produce or release asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section, such as, but not limited to, saws, scorers, abrasive wheels, and drills, shall be provided with local exhaust ventilation systems in accordance with subdivision (ii) of this subparagraph.

(2) **Work practices—**(i) **Wet methods.** Insofar as practicable, asbestos shall be handled, mixed, applied, removed, cut, scored, or otherwise worked in a wet state sufficient to prevent the emission of airborne fibers in excess of the exposure limits prescribed in paragraph (b) of this section, unless the usefulness of the product would be diminished thereby.

(ii) **Particular products and operations.** No asbestos cement, mortar, coating, grout, plaster, or similar material containing asbestos shall be removed from bags, cartons, or other containers in which they are shipped, without being either wetted, or enclosed, or ventilated so as to prevent effectively the release of airborne asbestos fibers in excess of the limits prescribed in paragraph (b) of this section.

(iii) **Spraying, demolition, or removal.** Employees engaged in the spraying of asbestos, the removal, or demolition of pipes, structures, or equipment covered or insulated with asbestos, and in the removal or demolition of asbestos insulation or coverings shall be provided with respiratory equipment in accordance with paragraph (d) (2) (iii) of this section and with special clothing in accordance with paragraph (d) (3) of this section.

(d) **Personal protective equipment—**

(i) Compliance with the exposure limits prescribed by paragraph (b) of this section may not be achieved by the use of respirators or shift rotation of employees, except:

(ii) During the time period necessary to install the engineering controls and to institute the work practices required by paragraph (c) of this section;

(iii) In work situations in which the methods prescribed in paragraph (c) of this section are either technically not feasible or impracticable to an extent insufficient to reduce the airborne concentrations of asbestos fibers below the limits prescribed by paragraph (b) of this section; or

(iv) In emergencies.

(v) Where both respirator and personnel rotation are allowed by subdivisions (i), (ii), or (iii) of this subparagraph, and both are practicable, personnel rotation shall be preferred and used.

(2) Where a respirator is permitted by subparagraph (1) of this paragraph, it shall be selected from among those approved by the Bureau of Mines, Department of the Interior, or the National Institute for Occupational Safety and Health, Department of Health, Education, and Welfare, under the provisions of 30 CFR Part 11 (37 F.R. 6244, Mar. 25, 1972), and shall be used in accordance with subdivisions (1), (ii), (iii), and (iv) of this subparagraph.

(i) **Air purifying respirators.** A reusable or single use air purifying respirator, or a respirator described in subdivision (ii) or (iii) of this subparagraph, shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits presented in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average airborne concentrations of asbestos fibers are reasonably expected to exceed no more than 10 times those limits.

(ii) **Powered air purifying respirators.** A full facepiece powered air purifying respirator, or a powered air purifying respirator, or a respirator described in subdivision (iii) of this subparagraph, shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average concentrations of asbestos fibers are reasonably expected to exceed 10 times, but not 100 times, those limits.

(iii) **Type "C" supplied-air respirators, continuous flow or pressure-demand class.** A type "C" continuous flow or pressure-demand, supplied-air respirator shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average airborne concentrations of asbestos fibers are reasonably expected to exceed 100 times those limits.

(iv) **Establishment of a respirator program.** (a) The employer shall establish a respirator program in accordance with